



Windbreak/Shelterbelt

Conservation Practice Job Sheet

380

Natural Resources Conservation Service (NRCS)

April 1997

Landowner _____



Definition

Windbreaks or shelterbelts are plantings of single or multiple rows of trees or shrubs that are established for environmental purposes. The height of the tallest row and overall density of foliage and branches of an individual planting greatly influence the size of the nearby area that is protected or sheltered.

Purpose

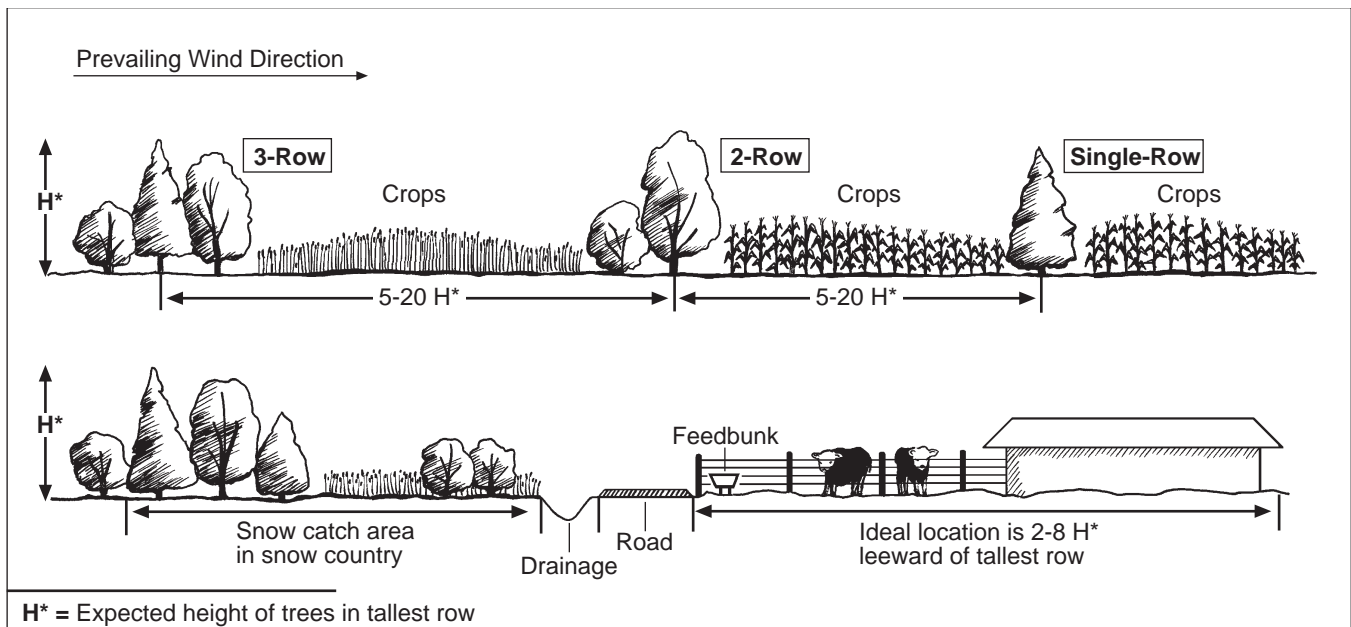
Windbreaks or shelterbelts are generally established to protect or shelter nearby leeward areas from troublesome winds. Such plantings are used to reduce wind erosion, protect growing plants (crops and forage), manage snow, and improve irrigation efficiency. Windbreaks also protect structures and livestock, provide wildlife habitat, improve aesthetics, and provide tree or shrub products. Also, when used as a living screen, windbreaks control views and lessen noise.

Where used

Windbreaks are “environmental buffers” that are planted in a variety of settings, such as on cropland, pasture, and rangeland (sometimes referred to as “living barns”), along roads, farmsteads, feedlots, and in urban areas.

Conservation management system

Windbreaks and shelterbelts are normally established concurrently with other practices as part of a conservation management system. For example, proper crop rotations and tillage techniques and management of residue in fields (conservation crop rotation and residue management) work with windbreaks to control wind erosion.



A windbreak or shelterbelt usually consists of multiple rows, with shrubs in the outer rows and taller trees in the interior. Complementary practices work with these environmental buffers to further control wind erosion and snow deposition and modify site characteristics for habitat and screening purposes. For comprehensive protection of a field, windbreaks are placed in a series across the area (typically spaced at intervals of 5 to 20 times the height of each windbreak), with individual windbreaks running parallel to one another, but perpendicular to prevailing winds.

Wildlife

For plantings to function properly, access by livestock and certain wildlife must be managed year-round (use exclusion and fencing). Connecting shelterbelts with existing or planned perennial vegetation, such as woodlots and woody draws (tree/shrub establishment) or riparian areas (riparian forest buffer), provides additional benefits for wildlife and aesthetics. Select native or adapted species that provide wildlife food or cover.

Operation and maintenance

Trees and shrubs in the windbreak or shelterbelt need periodic maintenance and, later on, possible renovation (tree/shrub pruning and windbreak/shelterbelt renovation). In arid areas windbreaks may need supplemental water or water harvesting techniques for successful establishment.

Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See practice standard Windbreak/Shelterbelt Establishment code 380.



Multiple-row windbreak protects farmstead and provides wildlife habitat.